



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,947	07/28/2003	Gregory J. May	200308970-1	9102

22879 7590 04/05/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT	PAPER NUMBER
----------	--------------

2851

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,947

Applicant(s)

MAY, GREGORY J.

Examiner

Rochelle Blackman

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,10-32,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 10-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/1/04 & 8/17/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Appeal Brief

In view of the Appeal Brief filed on January 17, 2005, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

Prior Art Exclusion under 35 U.S.C. § 103(c)

Based on applicant's statement regarding reference, U.S. Patent No. 6,811,267 to Allen et al., under REMARKS of applicant's response filed August 17, 2005, the reference is hereby disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 4-7, 10-14, 16-18, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toide et al. (U.S. Patent No. 5,739,875) in view of Folio (U.S. Patent No. 6,483,568).

Regarding claim 1, Toide discloses a projection system (see FIGS. 33, 42, and 43), comprising: a projection device (see 3 of FIG.S 33, 42, and 43) configured to project visible video images onto a screen (see 4 of FIG. 33, 42, and 43); a secondary signal transmitter (see 33 of FIG. 33 and 43 or 46 of FIG. 42) configured to project a plurality of channels of invisible light signals onto said screen, said invisible light signals being conveyed from said screen to one or more receivers (see 34 of FIGS. 33, 35, 42, and 43) configured to receive and decode said reflected invisible light signals; and wherein said invisible light signals are encoded to represent secondary information associated with said video (see col. 21, lines 16-20).

Regarding claim 2, Toide discloses wherein said secondary information is audio information (also see col. 21, lines 16-20).

Regarding claim 4, Toide discloses wherein said receivers comprise personal headphone sets (see 31 of FIGS. 33 and 43) configured to receive and decode said invisible light signals into audibly-perceptible sounds.

Regarding claim 6, Toide discloses wherein said screen is a reflective surface (see 4 of FIGS. 33, 42, and 43).

Regarding claim 7, Toide discloses wherein said screen is a transfective surface (also see 4 of FIGS. 33, 42, and 43).

Regarding claim 11, Toide discloses wherein said plurality of channels of invisible light signals represents different channels (the "different channels" are considered to be the different signals that are sent to the right speaker and left speaker of the "headphone sets" 31) of a single soundtrack (this is considered to be the audio or sound that matches the video signals projected) having a surround sound feature.

Regarding claim 12, Toide discloses wherein said plurality of channels of invisible light signals comprise polarized light signals (see 42 of FIGS. 37-40 and 42 - although not explicitly shown, the projection system is considered to have some sort of polarizer, since the polarization of light in projection optical systems is well known).

Regarding claim 13, Toide discloses wherein said plurality of channels of invisible light signals comprise modulated light signals (see 45 of FIGS. 34 and 36).

Regarding claim 14, Toide discloses wherein said invisible light signal comprises infrared light (see col. 21, lines 7-10).

Regarding claim 16, Toide discloses wherein said secondary signal transmitter comprises a light emitting diode (see 46 of FIGS. 38-40 and 42).

Regarding claim 17, Toide discloses wherein said secondary signal transmitter is positioned outside of said video projection device (see 42 of FIG. 33, 42, and 43).

Regarding claim 18, Toide discloses wherein said video projection device includes a lens (see 3 of FIGS. 33, 42, and 43) through which said video images are projected, and wherein said secondary signal transmitter is positioned inside of said video projection device and is configured to emit said invisible light signal through said lens (see 46 of FIGS. 39-42).

Regarding claim 30, Toide discloses viewing visually-perceptible light images (see 41 of FIG. 33) projected from a video projection device (3 of FIG.S 33, 42, and 43), which are projected onto a screen (see 4 of FIG. 33, 42, and 43).

Regarding claim 32, Toide discloses wherein said listening step includes listening to a plurality of channels of audio information (signals representing audio for the left ear and signals representing audio for the right ear) delivered from a plurality of speakers (see 31 and 34 of FIGS. 33 and 43).

Regarding claims 1, 5, 10, 30, and 31, Toide does not appear to disclose [claim 1] one or more receivers configured to be "selectively adjusted to receive and decode a selected subset of said plurality of channels of invisible light signals"; [claim 5] receivers that are "loudspeakers"; [claim 10] "wherein said plurality of channels of invisible light signals represents alternative soundtracks associated with said video images projected

Art Unit: 2851

onto said screen”; [claim 30] configuring a receiving device to “select a desired soundtrack from a plurality of available soundtracks; and decoding a subset of invisible light signals corresponding to said desired soundtrack; and [claim 31] “wherein different persons viewing the same set of visually-perceptible light images listen to different soundtracks associated with said set of projected light images”.

Folio teaches providing [claim 1] one or more receivers (see 50a of FIG. 4) configured to be selectively adjusted to receive and decode a selected subset of said plurality of channels of invisible light signals (see col. 7, lines 38-49); [claim 5] receivers that are loudspeakers (see 37a of FIG. 2); [claim 10] wherein said plurality of channels of invisible light signals represents alternative soundtracks associated with said video images projected onto a screen (see col. 7, lines 38-49); [claim 30] configuring a receiving device (see 50a of FIG. 4) to select a desired soundtrack from a plurality of available soundtracks (see function of 76a in FIG. 4 and see col. 7, lines 38-49); and decoding a subset of invisible light signals corresponding to said desired soundtrack (also see function of 76a in FIG. 4 and see col. 7, lines 38-49); and listening to said desired soundtrack (see function of 70a in FIG. 4); and [claim 31] wherein different persons viewing the same set of visually-perceptible light images listen to different soundtracks associated with said set of projected light images (for example, see 50a in FIGS. 2 and 4 – each “50a” represents a person, and see col. 7, lines 38-49)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Toide reference with one or more receivers configured to be “selectively adjusted to receive and decode a selected subset of said

plurality of channels of invisible light signals representing alternative soundtracks associated with said video images projected onto a screen"; receivers that are "loudspeakers"; and/or configure a receiving device to "select a desired soundtrack from a plurality of available soundtracks and decoding a subset of invisible light signals corresponding to said desired soundtrack and listening to said desired soundtrack; wherein different persons viewing the same set of visually-perceptible light images listen to different soundtracks associated with said set of projected light images" in the Toide reference, as taught by Folio for purpose of providing a system and/or method that can efficiently and economically provide supplemental audio content to a viewer or viewers (see col. 2, lines 30-34).

2. Claim 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Toide et al. (U.S. Patent No. 5,739,875) in view of Folio (U.S. Patent No. 6,483,568) as applied to claim 1 above, and further in view of Allen et al. (U.S. Patent No. 6,727,935).

Toide and Folio disclose the claimed invention except that infrared light is used instead of "ultraviolet light". Allen shows that the use of ultraviolet light as an equivalent invisible light is known in the art (see col. 5, lines 45-51). Therefore, because these two invisible lights were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the "ultraviolet light" for the infrared light.

3. Claims 19-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toide et al. (U.S. Patent No. 5,739,875) in view of Johnson et al. (U.S. Patent No. 6,377,306).

Toide discloses the claimed invention including except for a video projection device that includes a "digital micromirror device".

Johnson teaches providing a video projection device (see 8 of Fig. 3) that includes a digital micromirror device (see DMD of Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time invention was made provide the "projection system" of the Toide reference with a "digital micromirror device", as taught by Johnson in order to provide a lightweight, reliable, digital display with a wide viewing angle and good picture clarity (see col. 5, lines 34-44).

4. Claim 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toide et al. (U.S. Patent No. 5,739,875) in view of Johnson et al. (U.S. Patent No. 6,377,306) as applied to claim 1 above, and further in view of Folio (U.S. Patent No. 6,483,568).

Toide and Johnson disclose the claimed invention except for the separate channels of invisible light signals representing "different soundtracks associated with a single video".

Folio teaches providing separate channels of invisible light signals (infrared signals transmitted by wireless transmitter 42a – see col. 5, lines 52-57) representing different soundtracks (alternate languages for a movie – also see function of 76a in col. 7, lines 43-46) associated with a single video.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the "method for presenting audio information to video-viewing audience" of the combined Toide and Johnson reference with a method step of

providing separate channels of invisible light signals that represent “different soundtracks associated with a single video”, as taught by Folio in order to provide a method that can efficiently and economically provide supplemental audio content to a viewer or viewers (see col. 2, lines 30-34).

Allowable Subject Matter

1. Claims 35 and 36 are allowed.
2. Claims 35 and 36 have been found to be allowed because the prior art of record either alone or in combination neither discloses nor makes obvious the projection system with the feature of a “secondary signal transmitter to project invisible light signals encoded to represent secondary information associated with said video images onto a second screen” in combination with the other particular combination of features recited in claim 35.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'W. Perkey', with a stylized flourish extending from the end.

RB

William Perkey
Primary Examiner